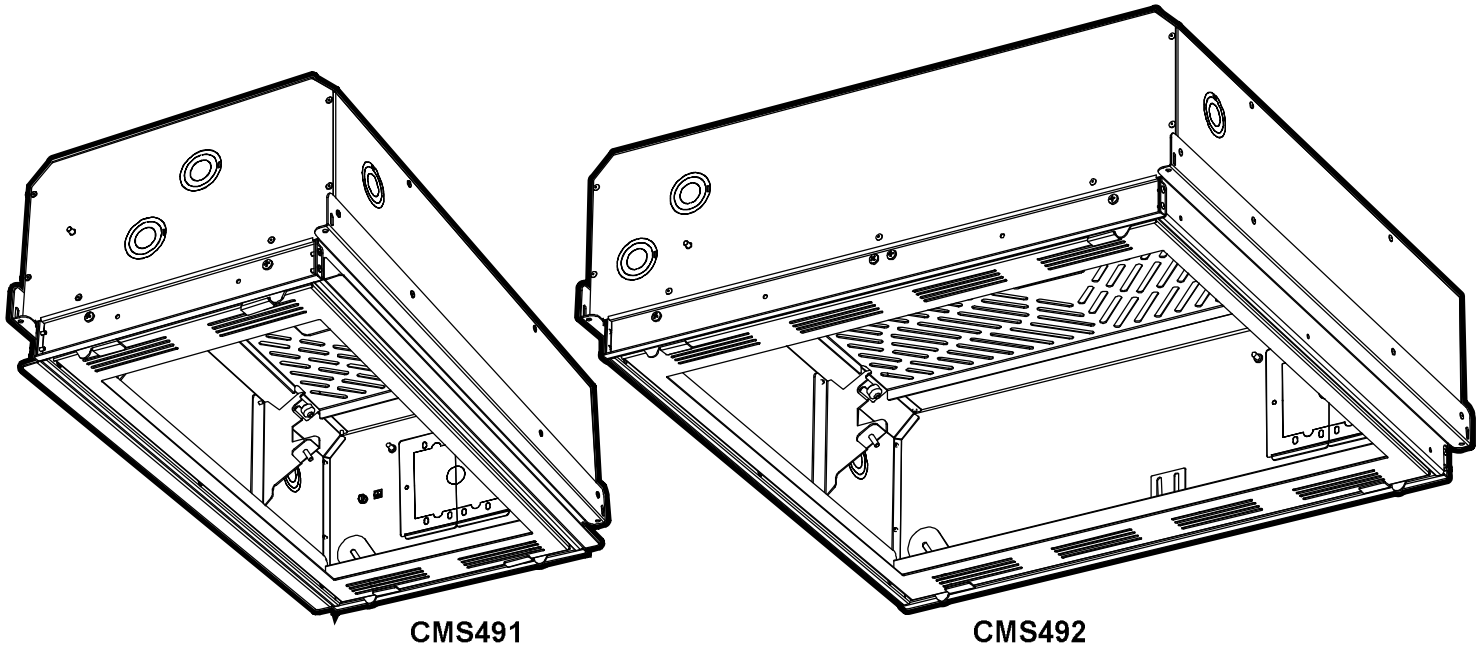
INSTALLATION INSTRUCTIONS



CMS491 CMS492

Ceiling Tile Storage Kits

CHIEF®
Our Mounts. **Your Vision.**

CMS491/492 Series

DISCLAIMER

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IMPORTANT SAFETY INSTRUCTIONS

WARNING: A WARNING alerts you to the possibility of serious injury or death if you do not follow the instructions.

CAUTION: A CAUTION alerts you to the possibility of damage or destruction of equipment if you do not follow the corresponding instructions.

WARNING: Failure to read, thoroughly understand, and follow all instructions can result in serious personal injury, damage to equipment, or voiding of factory warranty! It is the installer’s responsibility to make sure all components are properly assembled and installed using the instructions provided.

WARNING: Failure to provide adequate structural strength for this accessory can result in serious personal injury or damage to equipment! It is the installer’s responsibility to make sure the structure to which this accessory is attached can support five times the combined weight of all equipment. Reinforce the structure as required before installing the component.

WARNING: Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer’s responsibility to make sure the combined weight of:

- all components located in the **complete accessory** does not exceed 100 lbs (45 kg).
- all components attached to the CMS491/CMS492 Series component shelf may not exceed 25 lbs (22 kg) **per shelf**;
- all components attached to the **extension column**, (CMS491C/CMS492C models only) does not exceed 50 lbs (22 kg).

WARNING: Use this mounting system only for its intended use as described in these instructions. Do not use attachments not recommended by the manufacturer.

WARNING: For indoor use only.

WARNING: Never operate this mounting system if it is damaged. Return the mounting system to a service center for examination and repair.

IMPORTANT ! : The CMS491/492 has been designed to be mounted recessed into a suspended ceiling secured by a WireVice system.

IMPORTANT ! : The CMS491/492 has been designed to support a single electrical receptacle or a double receptacle.

NOTE: Ambient Temperature - The manufacturer's maximum ambient temperature is 120°F (49°C) and minimum ambient temperature is 40°F (4°C) so that the installer is able to determine acceptability of use of accessories and components in the operating environment.

NOTE: Spacings - To ensure safe operation of the equipment installed in the enclosure, per National Electric Code, ANSI/NFPA 70 Article 725.136(D)(1), a minimum separation of 6mm (0.25 in.) between power cords and signal or communication cables must be maintained.

NOTE: When selecting a Listed 120 Vac Receptacle for use as the main power source for the CMS Series boxes (to power the A/V equipment), make sure that AC Receptacle is rated at least 15A and it is used in the building's AC branch circuit that is connected to a circuit breaker rated at least 15A. Do not connect more than 12A from the 15A Receptacle, or 16A from the 20A Receptacle.

In the U.S., the equipment shall be installed per the applicable requirements of the National Electrical Code, ANSI/NFPA 70.

In Canada, the equipment shall be installed per the applicable requirements of the Canadian Electrical Code, CSA C22.1.

NOTE: The CMS491/492 Series consists of:

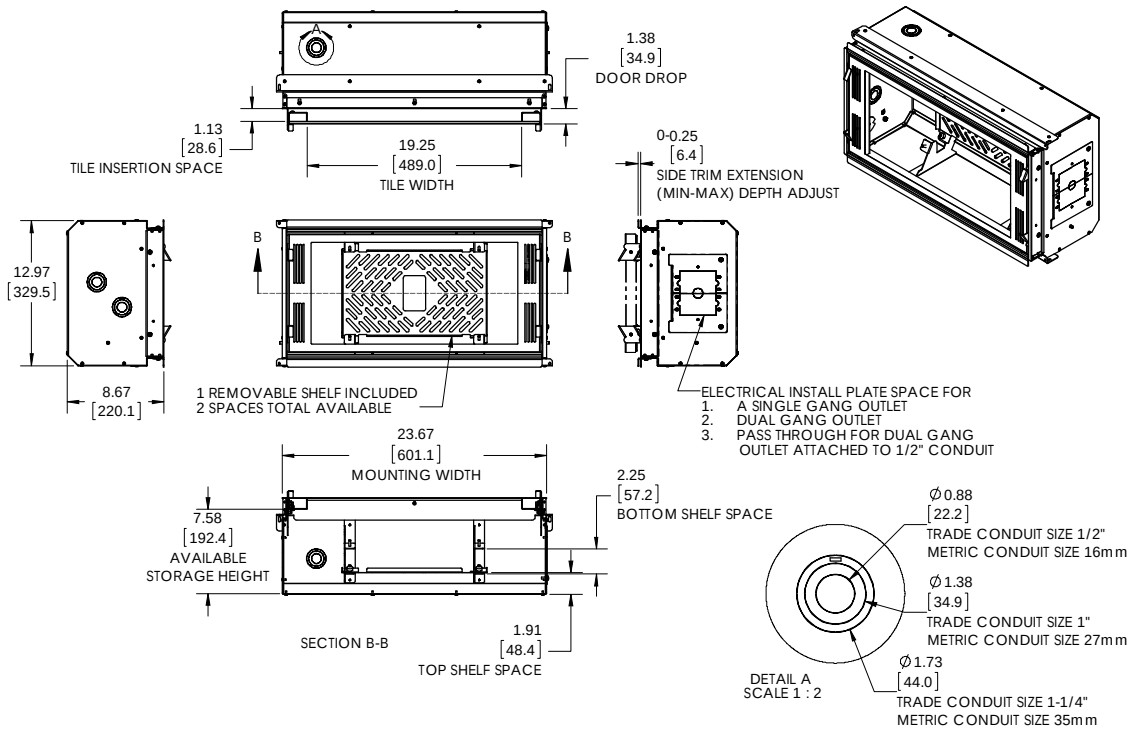
- CMS491 1x2 Standard Ceiling Box
- CMS491C 1x2 Ceiling Box with Column Drop
- CMS492 2x2 Standard Ceiling Box
- CMS492C 2x2 Ceiling Box with Column Drop

NOTE: The CMS491C and CMS492C each accommodate a Listed Chief CMS Series extension column (not included).

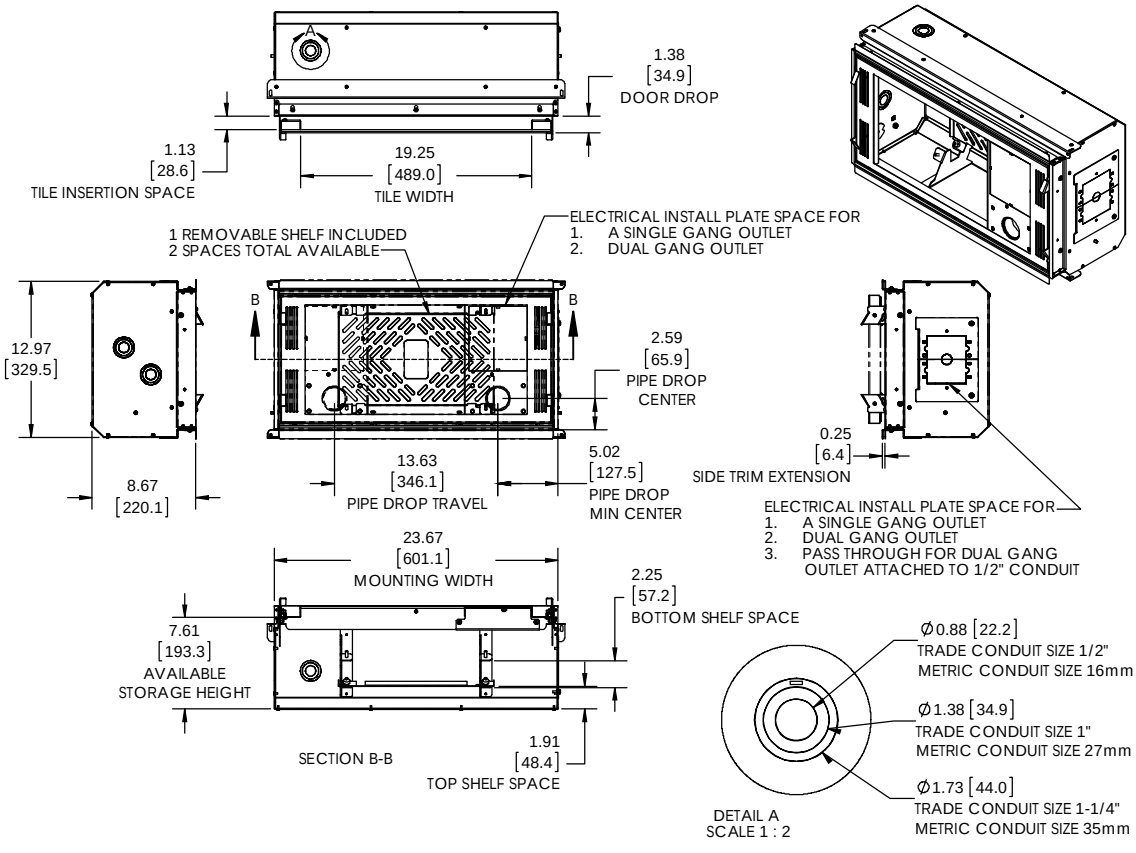
--SAVE THESE INSTRUCTIONS--

DIMENSIONS

CMS491

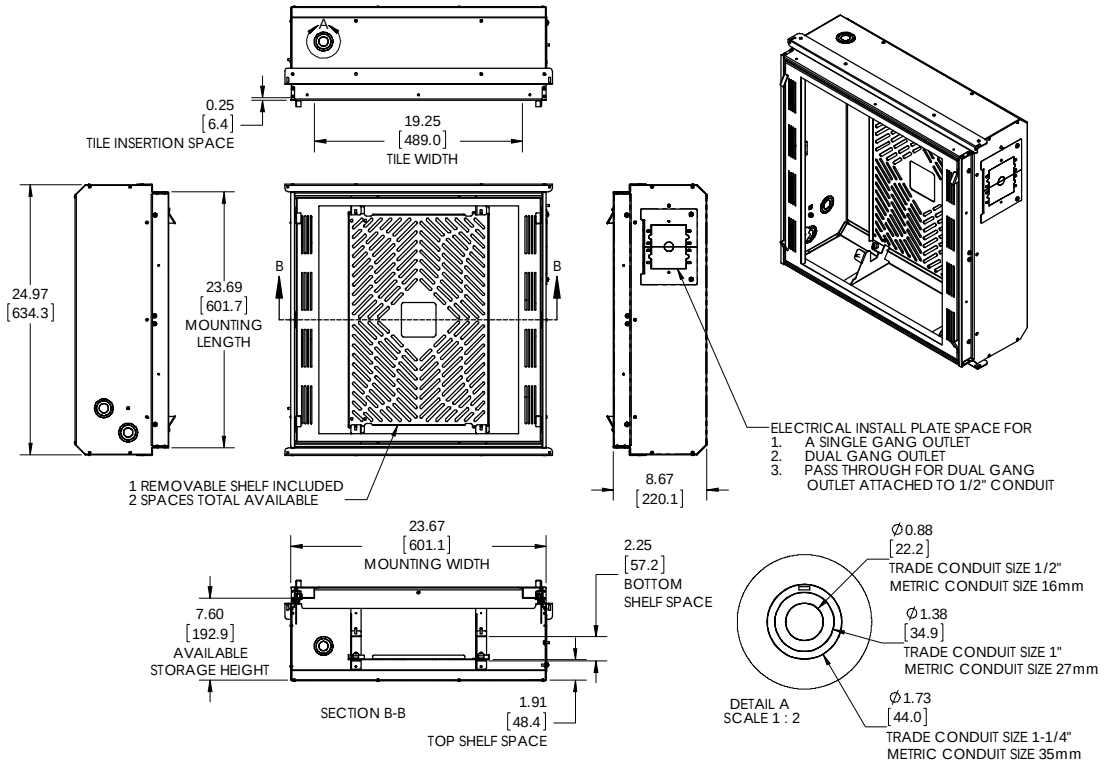


CMS491C

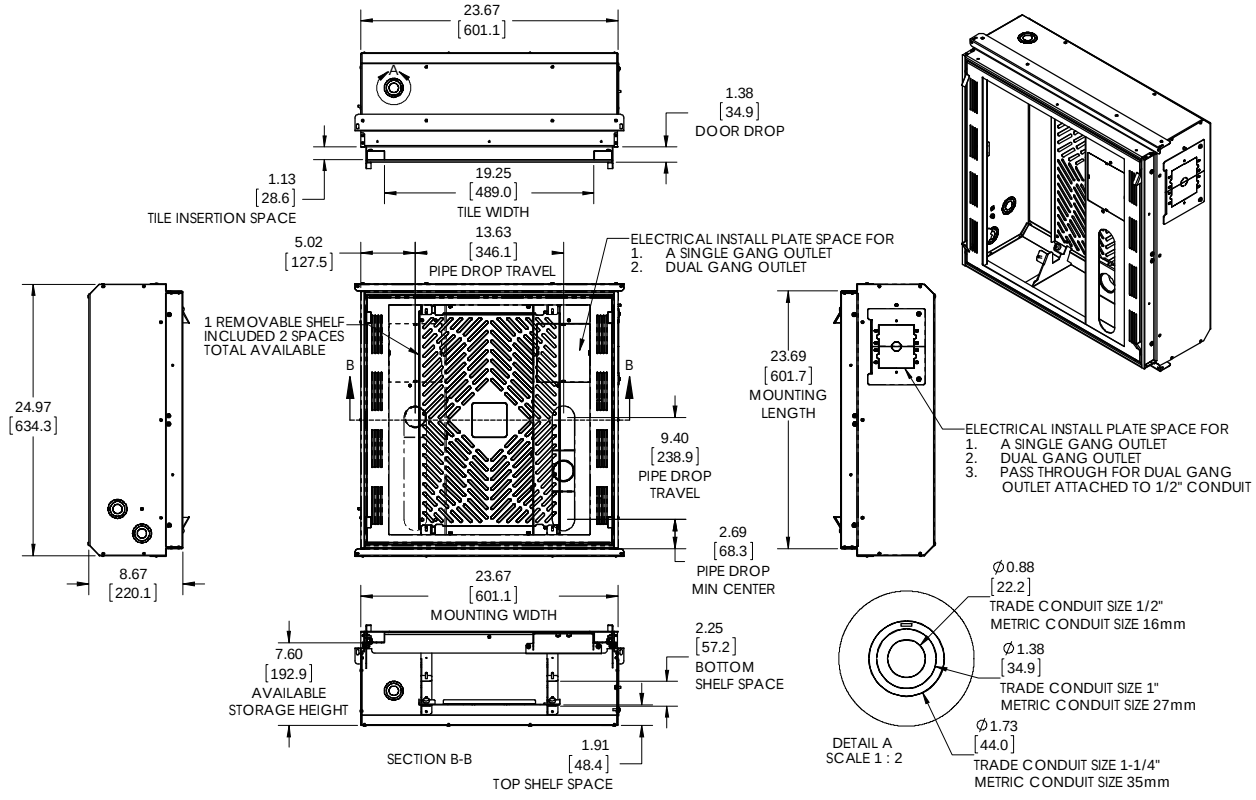


DIMENSIONS

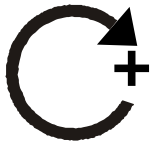
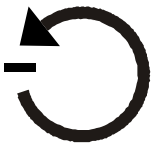
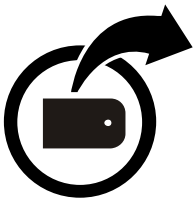
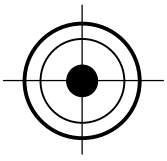
CMS492



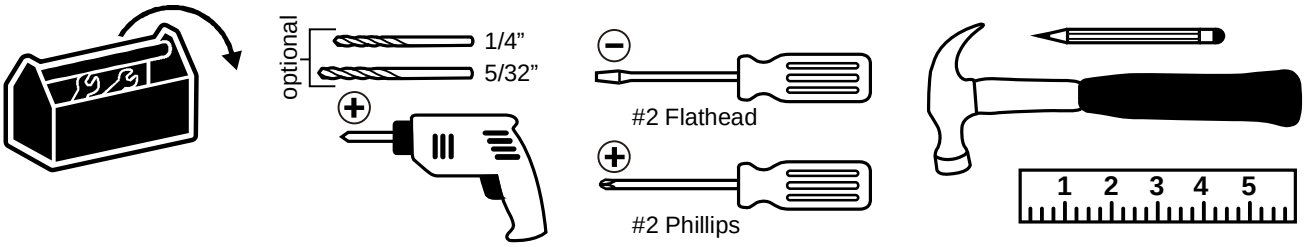
CMS492C



LEGEND

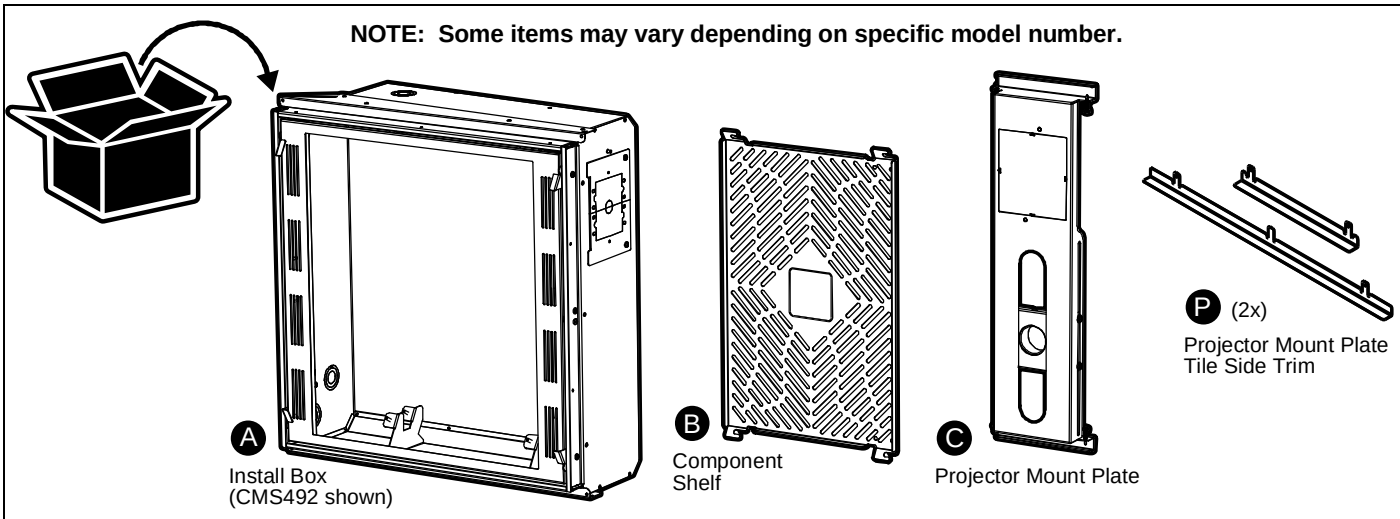
	Tighten Fastener Apretar elemento de fijación Befestigungsteil festziehen Apertar fixador Serrare il fissaggio Bevestiging vastdraaien Serrez les fixations
	Pencil Mark Marcar con lápiz Stiftmarkierung Marcar com lápis Segno a matita Potloodmerkteken Marquage au crayon
	Loosen Fastener Aflojar elemento de fijación Befestigungsteil lösen Desapertar fixador Allentare il fissaggio Bevestiging losdraaien Desserrez les fixations
	Drill Hole Perforar Bohrloch Fazer furo Praticare un foro Gat boren Percez un trou
	Phillips Screwdriver Destornillador Phillips Kreuzschlitzschraubendreher Chave de fendas Phillips Cacciavite a stella Kruiskopschroevendraaier Tournevis à pointe cruciforme
	Adjust Ajustar Einstellen Ajustar Regolare Afstellen Ajuster
	Flathead Screwdriver
	Remove Quitar Entfernen Remover Rimuovere Verwijderen Retirez
	By Hand A mano Von Hand Com a mao A mano Met de hand A la main
	Hammer Martillo Hammer Martelo Martello Hamer Marteau
	Target of Projector Punto de enfoque del proyector Ziel des Projektors Mira do projector Punto di proiezione Doel van de projector Cible du projecteur
	Security Wrench Llave de seguridad Sicherheitsschlussel Chave de seguranca Chiave di sicurezza Veiligheidssleutel Cle de securite

TOOLS REQUIRED FOR INSTALLATION



PARTS INCLUDED

NOTE: Some items may vary depending on specific model number.



A Install Box (CMS492 shown)

B Component Shelf

C Projector Mount Plate

P (2x) Projector Mount Plate Tile Side Trim

D #10-24 x 1/4 Pan Head Machine Screw

E #10-24 x 1/4 Button Head Security Screw

F Security Spinner

L (4x) Cable Lock (Wire Vice)

M 5/32” Security Key

G (4x) #10-24 x 5/8 Pan Head Tapping Screw

H (4x) #10-24 x 1” Pan Head Tapping Screw

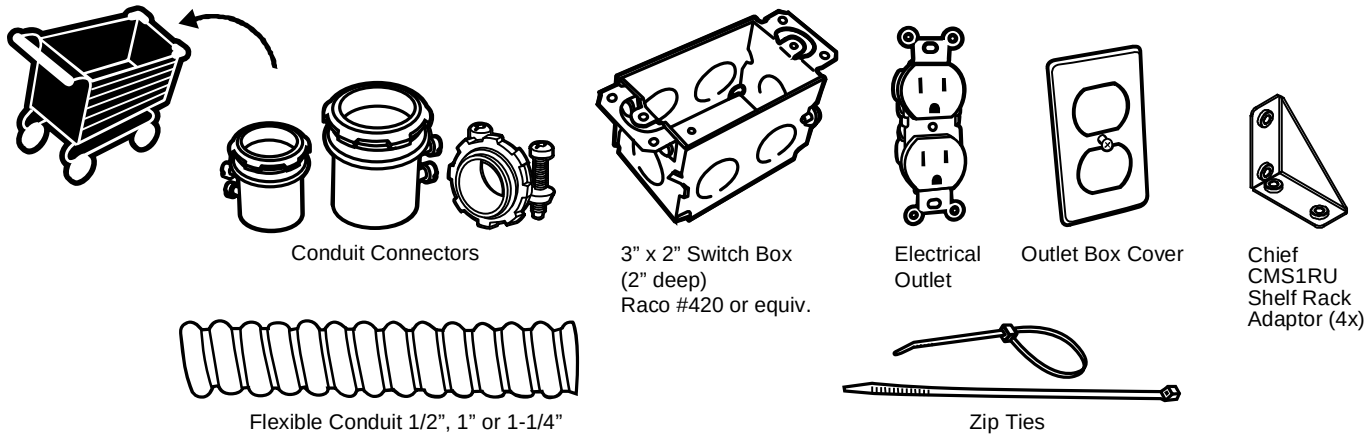
I (4x) #10-24 Thumb Nut

J (4x) .262 x 1 5/16 Eye Lag

K (4x) 1/4" x 2" Wire Anchor

N (4x) 1/16” x 25 ft Cable

OPTIONAL PARTS PER CUSTOM CONFIGURATION (NOT INCLUDED)



Conduit Connectors

3” x 2” Switch Box (2” deep) Raco #420 or equiv.

Electrical Outlet

Outlet Box Cover

Chief CMS1RU Shelf Rack Adaptor (4x)

Flexible Conduit 1/2”, 1” or 1-1/4”

Zip Ties

PREPARING FOR INSTALLATION

Installation Requirements

The CMS491/492 has been designed to be mounted recessed into a suspended ceiling consisting of 2' x 2' ceiling tiles and secured by a Wire Vice system.

NOTE: Regarding location selection for models CMS491C/ CMS492C: The design of the projector mount plate/ceiling AV enclosure system does not require pre-measurement of the mount location other than choosing the tile placement of the enclosure. If you are pre-measuring for projector mount location be sure to consider the items below.

- Dimensional offset of the display/projector relative to column (due to mount and interface).
- For projectors: any recommended dimensions of projector relative to target (see installation instructions included with the projector).

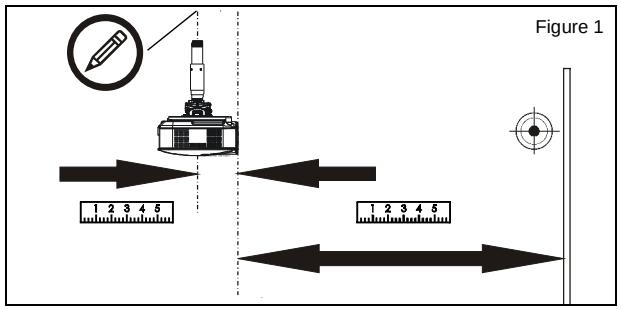


Figure 1

Preparing Framework

1. Remove one 2' x 2' tile from ceiling.
2. Move/reconfigure existing wires or conduit if obstructing location.
3. Pre-install cable hanger system.

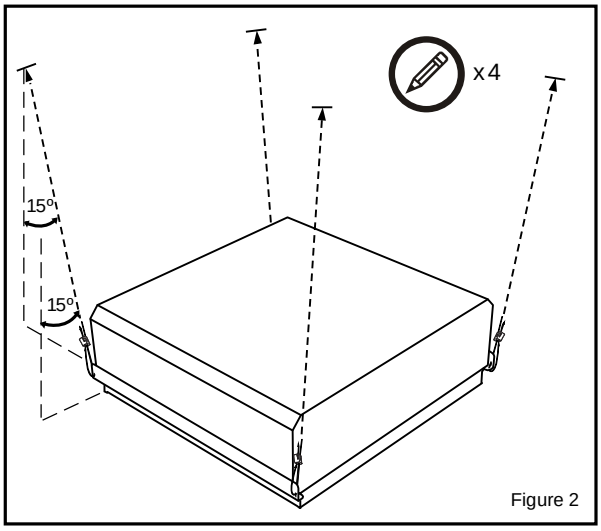


Figure 2

Examine ceiling structure (solid concrete, wood or steel truss) above kit to be installed to identify four support cable anchor locations. Each location should be approximately 15º outside of support holes in kit assembly. Mark locations with a pencil.

SUPPORT CABLE INSTALLATION

WARNING: Failure to provide adequate structural strength for this component can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the structure to which this component is attached can support five times the combined weight of all equipment. Reinforce the structure as required before installing the component.

Solid Concrete Ceiling Structure

WARNING: Anchors must be installed into structurally sound solid concrete with a minimum thickness of 1.75" (44.5mm) or greater. Installation into hollow concrete block, mortar, or concrete that exhibits cracking, spalling, or other defects may result in failure of anchor and serious personal injury or damage to equipment!

1. Drill 1/4" diameter x 1-3/8" deep pilot hole at each marked cable anchor support location (See Figure 3). Ensure hole is at least 2-1/2" from nearest concrete edge. Remove debris from hole.

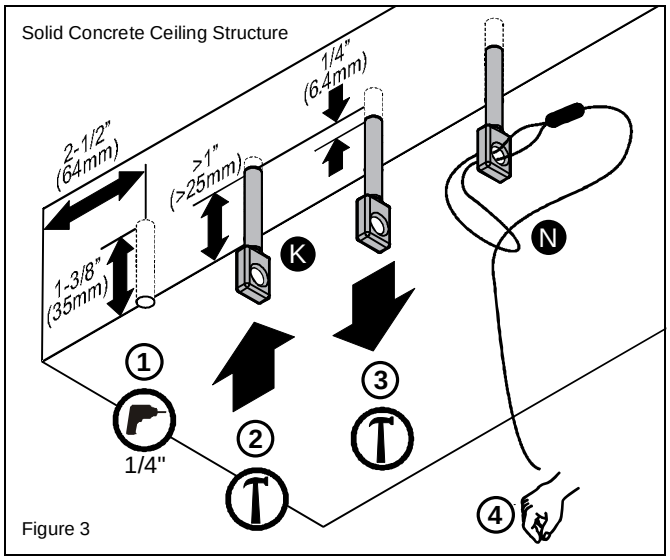


Figure 3

2. Tap anchor (K) into each hole to a depth of at least 1" (25mm) (See Figure 3).

WARNING: Failure to properly set anchor may result in failure of anchor and serious personal injury or damage to equipment!

3. Using claw portion of hammer, set each anchor (K) by pulling it out of hole approximately 1/4" (6.4mm). (See Figure 3)
4. Insert portion of manufactured loop on cable (N) through hole in anchor (K) (See Figure 3). Insert end of cable (N) through loop. Repeat for 3 remaining support locations.

Wood Ceiling Structure

WARNING: Anchors must be installed into wood with a minimum thickness of 1-1/2" (38.1 mm) or greater.

1. Drill 5/32" diameter x 2" deep hole at each marked cable anchor support location (See Figure 4). Remove debris from hole.

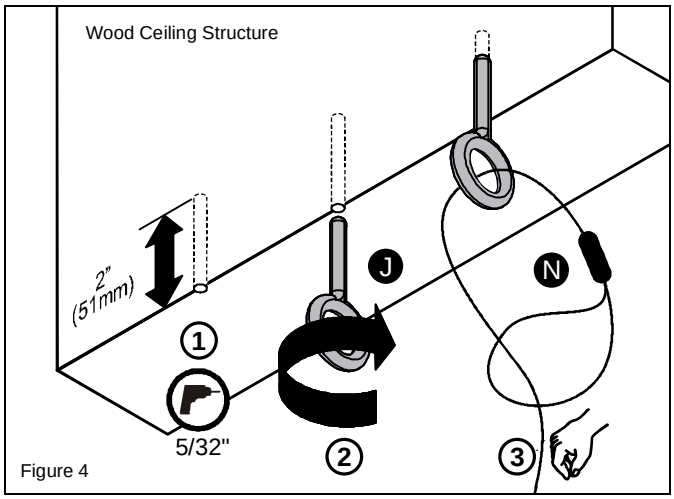


Figure 4

2. Fully thread eye lag (J) into each hole (See Figure 4).

3. Route end of cable (N) through eye lag (J) and then through cable loop (See Figure 4). Repeat for 3 remaining support locations.

Steel Truss Ceiling Structure

1. Route end of cable (N) over truss at marked cable anchor support location and then through cable loop. (See Figure 5) Repeat for 3 remaining support locations.

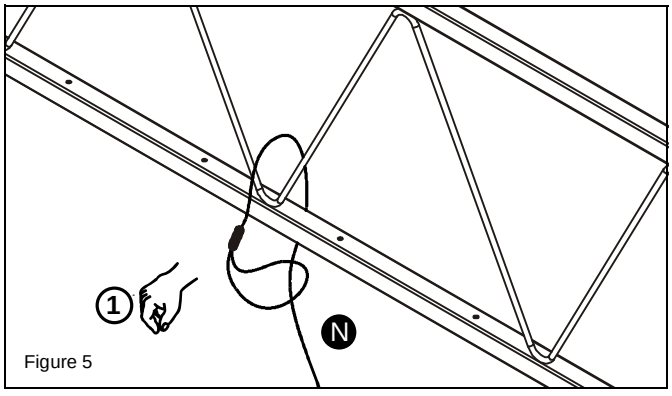


Figure 5

Installing Electrical Box and Outlets

Determine desired location for installing electrical outlets within box.

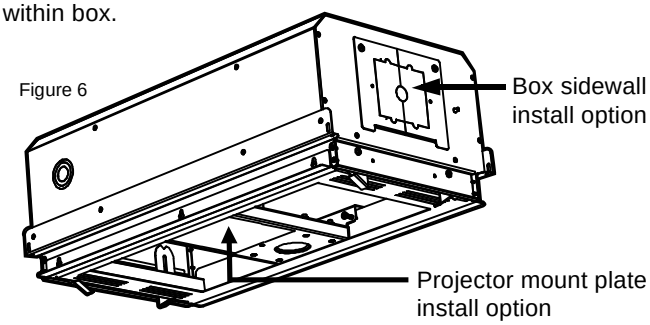


Figure 6

Box Sidewall Electrical Install Option

1. Remove two-piece electrical plate from box sidewall. Save screws for re-attachment. Break away inner portions of plate halves. Attach a pair of outlets to an electrical box, then attach plate halves to outlet box configuration.

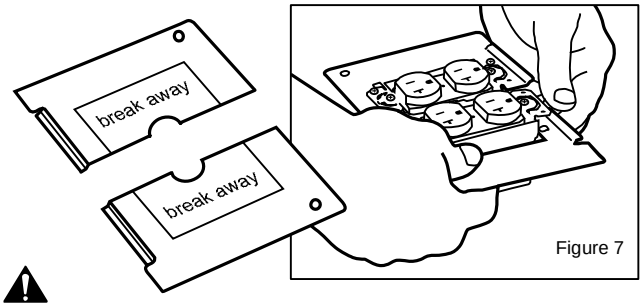


Figure 7

CAUTION: Injury may occur on sharp edges. Carefully discard the removable tabs.

2. Insert tab on bottom edge of electrical plate into opening on side wall of box. Rotate to flatten against box, and affix plate to box by re-using screws removed in Step 1.

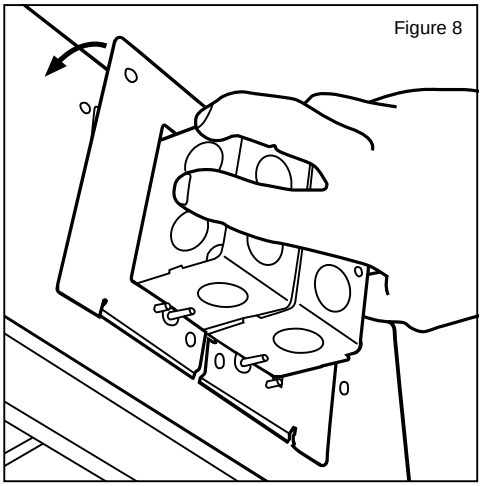


Figure 8

Projector Mount Plate Electrical Install Option

1. Remove attached electrical plate from underside of projector mount plate. Save nuts for reinstall.

2. Remove break away panel from projector mount plate.

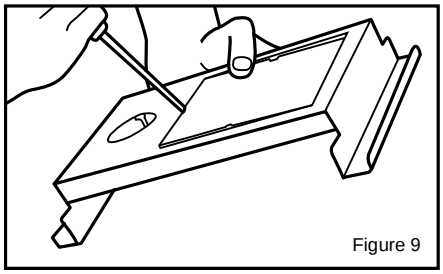


Figure 9

CAUTION: Avoid sharp edges.

3. Attach a pair of outlets to an electrical box, then attach accompanying one-piece electrical plate to outlet box configuration.

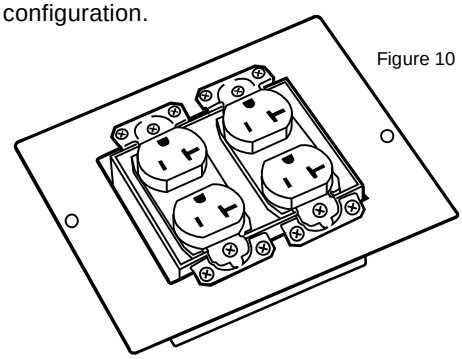


Figure 10

4. If outlet box configuration is attached to wiring/conduit prior to box attachment, remove two-piece electrical plate from box sidewall, feed configuration through large opening. Then re-attach two-piece plate to close around conduit.

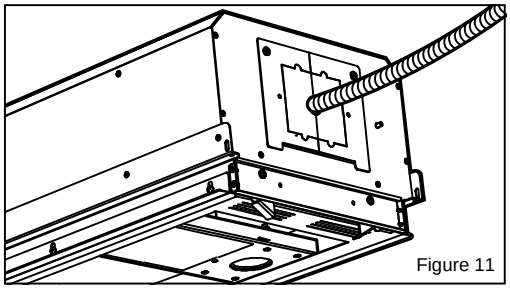


Figure 11

5. Attach complete outlet box configuration to projector mount plate as shown below in figure 12. Secure by re-attaching nuts removed in Step 1.

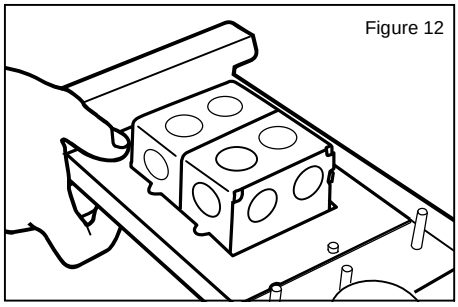


Figure 12

Cleat adjustment for various tile heights

1. Loosen screws along side cleat, adjust and retighten as needed to accommodate for tile height.

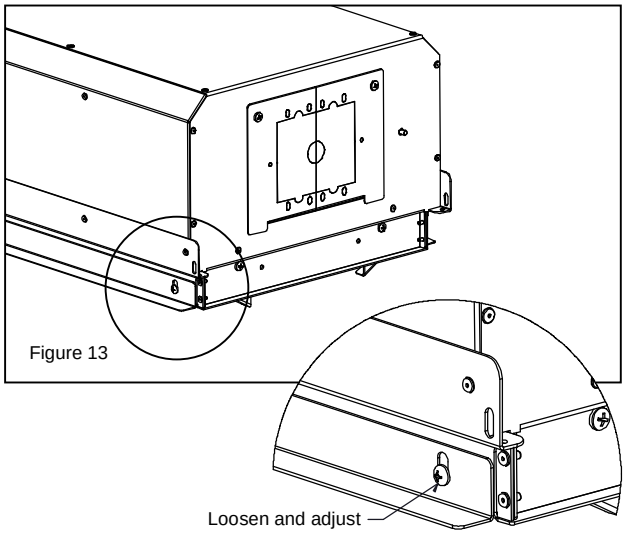


Figure 13

NOTE: Remove the cleat entirely to allow the enclosure to be mounted closer to the tile grid frame.

Placing CMS491/492 into Ceiling Structure

1. Carefully insert box through opening. Note angled back edges design which allow box to fit through 2' x 2' opening.

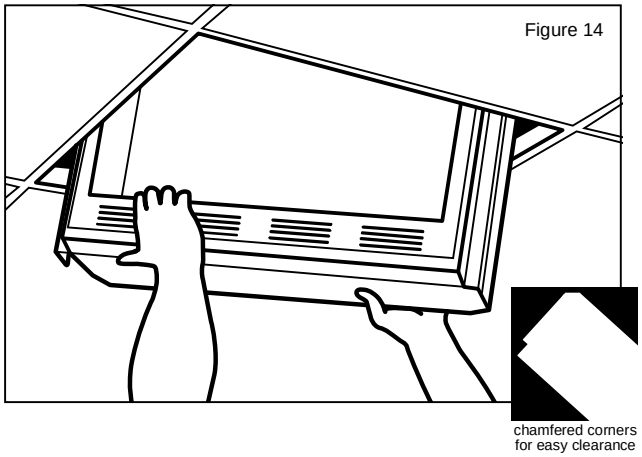


Figure 14

2. Rotate and drop box to gently rest into place onto drop ceiling framework.

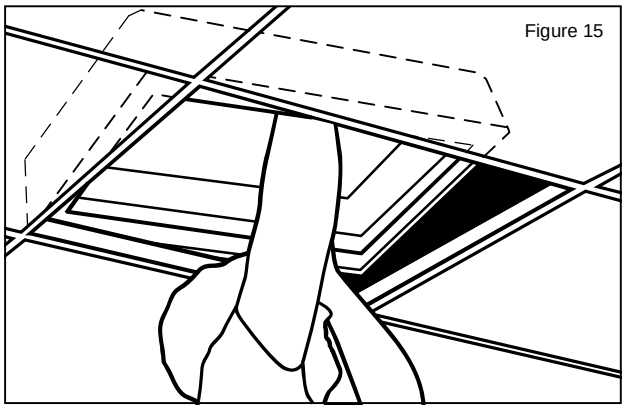
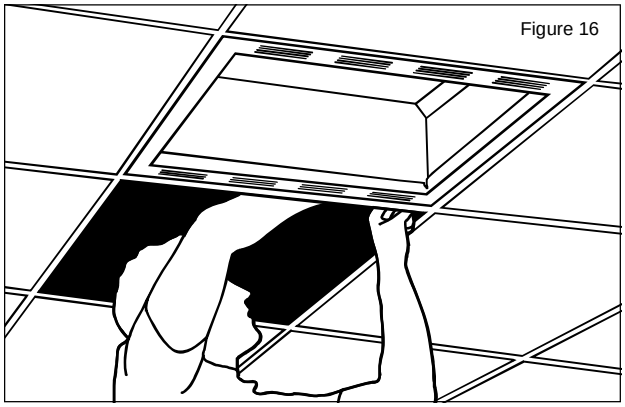


Figure 15

Installing Cable to Box Frame

1. Remove adjacent ceiling tiles as needed to access cable attachment locations.

Figure 16



2. Attach cables as shown (figure 17) using cable locks (L) to secure cable, adjusted to proper length - allowing box to be level, and **NOT** RESTING ON CEILING FRAMEWORK.

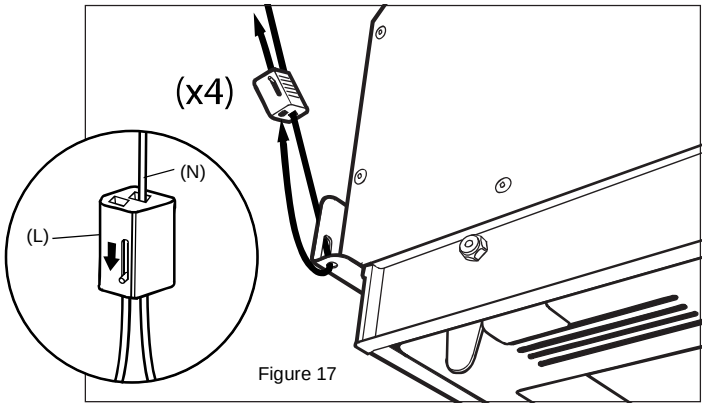


Figure 17

WARNING: Not properly supporting box with cable hanger system may lead to serious injury or death.

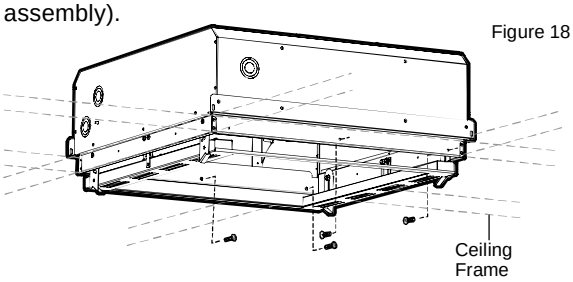
CAUTION: Failure to properly tension cables (N) may result in damage to ceiling tile framework.

3. Thread each cable (N) completely through cable lock (L) corresponding hole in corner of CMS491/492 frame, and completely through opposite side of cable lock (L) (see figure 17).

4. Adjust cable tension until CMS491/492 frame is supported entirely and evenly by all four support cables, but not so tight as to distort ceiling tile framework.

5. Secure CMS491/492 assembly in place by feeding #10-24 x 5/8 pan head tapping screws (G) through holes as shown and tighten until secure against ceiling tile framing (2 screws each on opposite sides of the assembly).

Figure 18



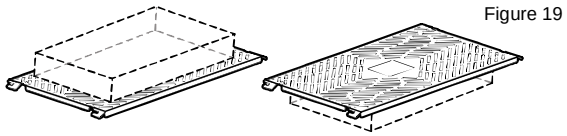
Adding Components

NOTE: The CMS491/CMS492 box is designed for attaching a component shelf at two different heights. The following instructions refer to installing the Listed accessories CMSUNV1 and CMSUNV2.

WARNING: Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the weight of all components attached to the CMS491/CMS492 Series component shelf, does not exceed 25 lbs (22 kg) **per shelf**.

1. Attach component to shelf prior to install. Component may be attached either on top of shelf or below shelf. Attach components per component manufacturer recommended method(s).

Figure 19



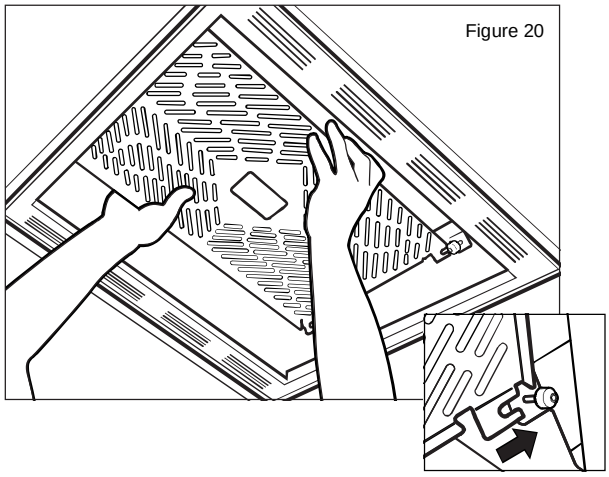
Component Shown Above

Component Shown Below

2. Attach one #10-24 thumb nut (I) to each threaded post.

3. Position shelf (with component attached) into box and hook four corner slots onto the posts of the shelf supports.

Figure 20



4. Hand tighten nuts (I) to secure shelf in place.

Finish Install Site

1. Pre-cut a ceiling tile to fit inside the drop panel framework

   SIZE:
   CMS491: 19 1/8” x 10 3/8”
   CMS492: 19 1/8” x 22 1/8”

NOTE: If installing models CMS491C/492C cut ceiling tile to fill gaps around mounting plate. Install tile trim (P) on edges of tile that touch mounting plate, and fold trim tabs over tile. (see Figure 21). Install tile with trim attached AFTER installing projector mount plate.

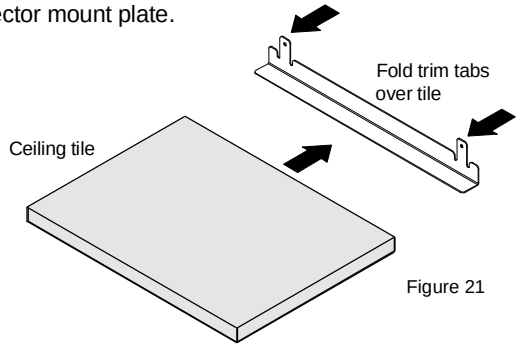


Figure 21

2. Finish frame assembly by opening four latches in door panel dropping panel down. Slide tile (cut to size) into location.

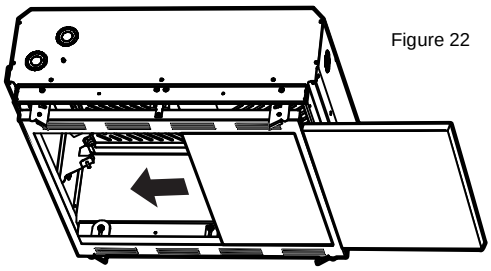


Figure 22

3. Push panel assembly back into place and rotate latches to lock position.

Projector Mount Plate and Extension Column Installation

NOTE: The following instructions refer to installing Models CMS491C and CMS492C, or installing the Listed accessories CMS441 and CMS442 into Models CMS491 and CMS492, respectively.

OPTIONAL: Install the electrical outlets as outlined in the **Installing Electrical Box and Outlets** section of this instruction manual.

1. Install four 10-24 x 1" screws (H) into projector mount plate (2 at each end), and install projector mount plate into position inside box (see Figure 23).

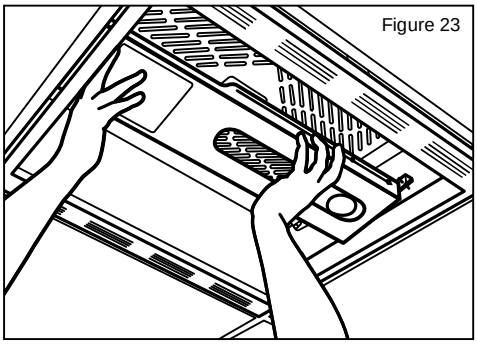


Figure 23

2. Once into position, drop plate down onto mounting rails.

WARNING: Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer’s responsibility to make sure the combined weight of all components attached to the CMS491C/CMS492C extension column, does not exceed 50 lbs (22 kg).

3. Install 1-1/2" NPT or NPSM following ANSI/ASME B1.20.1 (Schedule 40, 0.154" minimum thickness steel or aluminium - ASTM B221) threaded extension column (not included) into extension column support until tight, with a minimum of four threads engaged.

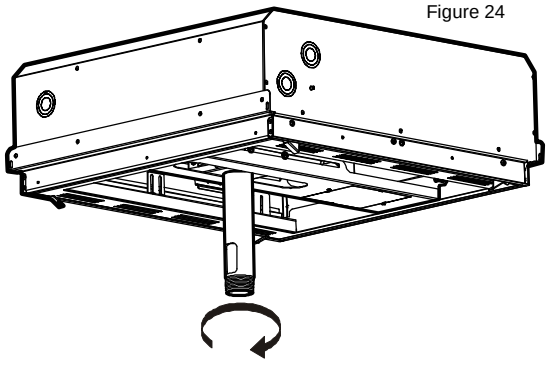


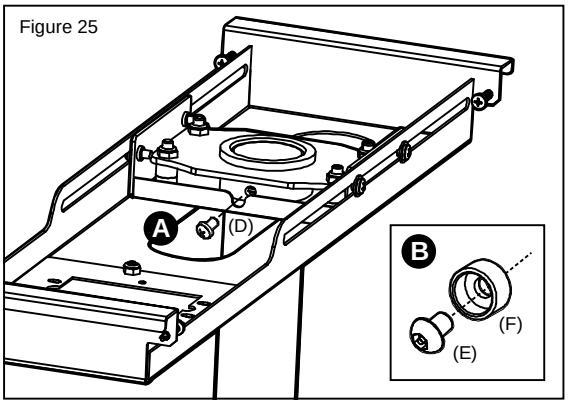
Figure 24

④ Secure extension column by one of the following methods (See Figure 25):

A. Install one 10-24 x 1/4" Phillips pan head screw (D) into extension column support, tightening firmly against column.
B. OPTIONAL: Install one 10-24 x 1/4" button head security screw (E) through security spinner (F) into column support, tightening firmly against column.

NOTE: Security spinner (F) is designed to spin, even when screw is tight.

Figure 25



⑤ Install and power the projector to generate the image profile to match to the screen (make sure to adjust the resolution settings and aspect ratio of the projector to desired settings)

⑥ Move the mount plate as required to adjust the image to the target screen (note that the CMS491C/ CMS492C enclosure may be moved within the tile to aid in location of the mount plate).

⑦ Tighten the four screws on both ends of the mount plate, and the four screws on the sides of the CMS492C projector mount plate to secure the projector position within the enclosure.

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